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ABSTRACT

A year-long study investigated the perceptions, attitudes, and beliefs of rural educators concerning gifted learners and their educational needs. Participants were all K-12 teachers (43) and administrators (3) in a single, rural southeastern Kansas school district serving 518 students. During the study, conducted in school year 1985, teachers attended inservice sessions related to gifted education and completed a series of surveys and questionnaires which dealt with perception of myths associated with gifted education, attitudes toward gifted education, and knowledge of teaching models for gifted education. Findings of the myths survey indicated that these rural educators held to virtually none of the myths, which included the idea that gifted education cannot occur in the regular classroom; both elementary and secondary teachers clearly believed that gifted students can be served in the general classroom. Teachers were interested in curriculum design for gifted learners but reported little knowledge of teaching models associated with gifted education. These results suggest that curriculum development is a crucial need of rural educators, particularly in states where gifted education is a legislative mandate. (JHZ)

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Beliefs and Attitudes of Rural Educators and their Perceived Skill Levels in using Curriculum Models for the Education of Gifted Learners

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Abstract

Perceptions, attitudes, and beliefs of rural educators (K-12) toward gifted learners and their educational needs is the focus of this study. In a setting where gifted education is mandated by state legislation, it is crucial to determine educators' attitudes about serving gifted students since programs directed by an itinerant gifted education consultant or teacher might be limited. Teachers in this geographically isolated, midwestern district completed a series of surveys and questionnaires while participating in staff development activities. The results of three instruments, including perception of myths associated with gifted education, attitudes toward gifted education, and knowledge of teaching models, are reported. Findings to the myths survey indicate that these rural educators hold to virtually none of the myths. Both elementary and secondary teachers clearly believe gifted students can be served in the general classroom. Teachers are interested in learning about curriculum designs for gifted learners as well. However, teachers report that they do not have a good or mastery level awareness in the adaption or use of teaching models often associated with gifted education. These findings suggest that curriculum development is a critical need of rural educators, particularly in states where gifted education is a legislative mandate.

In about one-third of the states in the nation, programs for academically and intellectually gifted learners are mandated by state law. Regardless of size, financial resources, locally developed goals, or geographical location, a school district must provide services for this population. In a state like Kansas, the spirit of Public Law 94-142, the Education for All Handicapped Children Act, is observed. Regulations pertaining to special education students in categories such as speech, language and hearing or learning disabilities, apply to gifted children as well.

In a rural setting, a mandate for gifted education presents special problems. Appropriately trained teachers certified in gifted education aren't always willing to live and work in geographically isolated areas, particularly if they do not have a rural background. Small enrollments and likewise small numbers of gifted students require that some teachers of the gifted travel to more than one school, schools often located in more than one district. These educators spend as much or more time traveling than meeting with students. Their teaching loads are often extensive, sometimes requiring them to serve gifted students in grades K-12.

As per IEP (individual education plan), students identified as gifted might work with this teacher once a week or less, sometimes for only 30 minutes or an hour. Special education cooperatives often undertake the hiring and assignment of special education teachers, including teachers of the gifted,

not just as a financial solution, but also a logistical one. In rural areas, gifted education is under the aegis of special education, a protection that is sometimes a boon, often a detriment.

The conditions described characterize gifted education in rural areas. Perhaps more so than in urban settings, the education of gifted rural students is highly dependent on the participation, cooperation, and efforts of general educators, a position substantiated by O'Connell & Hagans, (1985a). It is therefore important to ascertain the attitudes and knowledge about gifted students that educators in rural areas possess, as well as their perceived skill levels in curriculum development for that group of learners.

A review of the research literature pertaining to rural or geographically isolated gifted children reveals that this population has been subject to little investigation. Moreover, there is sparse research evidence concerning the attitudes or perceived skill levels of general educators who teach gifted students.

General educators in rural America seem to support services for gifted children. A survey of 53 teachers of K-12 gifted students and facilitators of gifted programs in rural schools showed a need for instructional services in all areas of gifted education, but particularly in awareness of the needs and problems of gifted and talented children (Witters, 1979).

Pringle et al. (1972) described a project involving enrich-

ment activities for 63 gifted elementary school children in a rural school district. The gifted facilitator spent one day a week at each of four centers working with students using a curriculum based on problem solving techniques and affective objectives. Evaluation of the project was based on teacher reaction to the project (mainly positive) and pupil satisfaction (all preferred resource center activities over regular classroom activities). Pringle concluded that the project had more advantages than disadvantages for gifted elementary school children in rural sites.

Hamrin (1981) reported a study of 239 classroom teachers and 14 administrators from eleven small districts geographically situated in rural Maine. Using a questionnaire to gather needed data, the study identified as problems a lack of instructional preparation, lack of definition of gifted/talented consultant and classroom teacher roles, lack of data on effectiveness of alternative program models, implementation in small rural areas, and funding. The study concluded that if teachers and administrators are the key to successful programs for gifted students, teacher training programs must initiate change at all levels for all schools, teachers, and students.

Related literature specific to gifted and talented learners in geographically isolated settings includes a collection of curriculum guides designed for gifted students. Additionally, materials such as student record forms, time lines, checklists for program development, and forms for recommending gifted

students can be found in the research literature (McCune, 1980; Anderson, 1979; Rogers, 1979).

According to O'Connell & Hagans (1985b), there are four characteristics of successful rural staff development. First, the focus must be on topics relevant to rural educators. Second, inservice must respond to the varied stages of adult development: a movement from strict, rigid beliefs to a breaking away from strict rules and beliefs; a recognition of a variety of available options; and ultimately, a synthesis of information that creates additional categories leading toward effective, spontaneous decision making. Third, instructional leaders need to provide follow through and appropriate supervision enabling individual teachers to translate ideas presented in training to everyday, rural classroom situations. Fourth, and last, long-term staff development activities need to be planned to address the stages of concern about change which the teachers will naturally feel as they attempt to implement instructional changes.

PROBLEM STATEMENT

What perceptions, attitudes, and beliefs toward gifted learners and education of the gifted are held by general educators at both the elementary and secondary levels in small, rural schools? Questionnaires and surveys assessed teacher opinion. This year-long study resulted in the collection of a number of questionnaires and surveys, four of which are reported here.

INDEPENDENT VARIABLES

Sex of respondent and teaching level are the two independent variables in the study.

DEPENDENT VARIABLES

The dependent variables include responses to an 1) Inservice Interest Survey; 2) Myths of Gifted Education Survey; 3) Attitudes toward Gifted Education instrument; and the 4) Knowledge of Teaching Models Survey.

POPULATION

The study is generalizable to rural educators in Kansas.

HYPOTHESES TO BE TESTED

A. There will be no significant difference in the response frequency of elementary teachers, secondary teachers, and administrators to the Myths of Gifted Education instrument.

B. There will be no significant difference in the results of an analysis of variance testing zero effects of level and sex on four concept clusters of the Myths of Gifted Education instrument. None of the interactions will be significant.

C. There will be no significant difference in the response frequency of elementary teachers, secondary teachers, and administrators to the Attitudes toward Gifted Education Survey.

D. There will be no significant difference in the response frequency of elementary teachers and secondary teachers to the

Knowledge of Teaching Models Instrument.

ANTICIPATED FINDINGS

It is anticipated that significant differences will be found in the response frequency of elementary and secondary teachers on all surveys or instruments. Additionally, attitudes toward gifted education are expected to be more negative than positive, particularly with regard to programming options requiring service outside the regular education classroom. Further, it is postulated that general educators will have limited knowledge of various curriculum models appropriate to the education of gifted students. Lastly, it is anticipated that subjects will prefer that education of the gifted originate from within the regular classroom, despite a lack of knowledge on the part of general educators about curricular models applicable to the education of gifted learners.

Method

SUBJECTS

The research design is one of intact groups that includes all teachers (elementary, n=23; secondary, n=20; administrators, n=3) in a single, rural, southeastern Kansas school district (518 total students, K-12). Subjects teach in three K-6 elementary schools, all located in different towns, and one 7-12 junior-senior high school. The teaching faculty mirrors a homogeneity

of background that is consistent with the make up of persons living in the area. Many of the teachers, both male and female, are natives of the county and are engaged in second professions, e.g., farming, nursing home work.

The subject pool reflects the changes school districts typically experience with regard to resignations and hirings when a study overlaps two school years. This results in an unlike number of respondents for the questionnaires. Some respondents completing surveys during the project's initiation left the district by the time the second school year began. Conversely, others entered the study in its second phase.

INSTRUMENTS

An Inservice Interest Survey instrument, composed of 17 areas of concern or interest in gifted education was given to all teachers, May 13, 1985. It (as well as all of the other survey instruments) was designed by the first author to assess typical topics current in the literature of gifted education.

A second questionnaire, a Myths of Gifted Education instrument was also administered at the beginning of the study. It is composed of 22 items, most of them misconceptions about gifted learners, gifted education, grades and IQ to which teachers responded "truth" or "myth".

Given at the beginning of the school year in August, 1985, the third instrument is a Knowledge of Teaching Models scale; it assessed knowledge of curriculum development for the gifted.

Teachers were asked to respond on a scale from one (1) to five (5) (no awareness, slight awareness, moderate awareness, good awareness, and mastery awareness) to the following models: Bloom's Cognitive Taxonomy, Krathwohl's Affective Taxonomy, Bruner's Structure of the Discipline, Guilford's Structure of the Intellect, Kohlberg's Moral Dilemmas, Parnes' Creative Problem Solving, Renzulli's Enrichment Triad, Taba's Teaching Strategies, Taylor's Multiple Talent Approach, Treffinger's Self-Directed Learning, William's Teaching Strategies, and Clark's Integrative Model. These models constitute major teaching-learning models which can be used in developing and implementing curriculum for gifted students (Maker, 1982).

A Gifted Education Attitude Survey was given at the August 23, 1985, pre-service workshop. It posed twelve statements to which subjects responded on a five point scale from strongly agree, agree, no opinion, disagree, to strongly disagree.

Since all of the instruments were designed for this particular setting for teachers of this district, there is no normative validity or reliability information for any of the measures.

PROCEDURES

At the end of the 1985 school year, the first author met with the entire elementary and secondary teaching staff to introduce the upcoming study. It was explained that teachers would be participating by responding to questionnaires and attending inservice sessions relative to gifted education. The

sessions would be designed, in part, as a result of data gathered. Staff development activities occurred as a result of ongoing data analysis and classroom observation.

The first set of data was collected in May and included responses to the Inservice Interest Survey and the Myths of Gifted Education instruments. All teachers and administrators were asked to complete both measures according to standardized directions. Following the administration of the Myths of Gifted Education instrument, the principal investigator discussed each of the 22 items, explaining why it was or was not a myth, and responded to comments or questions from the participants.

At this time, as with all other data collection periods, responses from the participants were coded according to sex and teaching level. Social security numbers were used as identifiers enabling the tabulation of data for all participants on all instruments (except the initial Inservice Interest Survey).

During a teacher pre-service day, August 23, 1985, that included all staff members (some new to the system as well as to the study), the chief investigator shared the results of the inservice interest survey that had been administered the previous May. Goals and objectives of the research study were reviewed. At this time, the Gifted Education Attitude Survey and the Knowledge of Teaching Models scale were administered to the entire group of teachers and administrators.

At other points during the coming school year, the first author or a research assistant, visited and observed in the

classrooms of identified gifted students and consulted with their teachers on a one to one basis. Three additional formalized teacher inservice days occurred: November 27, 1985; January 27, 1986; and May 23, 1986. Data were collected at these points in conjunction with staff development activities directed by the research team.

DATA ANALYSIS

For all survey items, frequencies and percentages of responses are tabulated. To test the hypothesis of independence, chi-square procedures $p < .05$, are reported for the Myths of Gifted Education Survey, the Knowledge of Models inventories, and the Gifted Education Attitude Survey.

Since the 22 item MGE survey could be clustered into four concept groupings, (Behavior of Gifted Students, Adult Reactions, Programming Options, and IQ and Grades), responses to items within clusters were summed, creating four new variables. A one way analysis of variance, $p < .05$, tested non zero effects for level and sex.

RESULTS

Results of the initial Inservice Interest Survey for both elementary and secondary teachers are reported in Table 1.

Insert Table 1 about here

A clear majority of teachers indicated that they were interested in learning more about incorporating gifted education into the regular classroom. The next most frequently cited item of interest by both secondary and elementary teachers was learning styles/teaching styles (A topic subsequently highlighting the January, 1986, staff development session.). Elementary teachers also indicated strong interest in curriculum designs for gifted students.

Of lesser impact to both elementary and secondary teachers was learning more about gifted students who are handicapped, parent concerns, perfectionistic behavior, gifted girls, and working with parents of gifted students.

Teachers had the opportunity to list other interest topics that might not have been provided on the survey options. Those included enlisting possible teacher support for gifted education in the regular classroom and writing.

The myths survey tested the following null hypotheses: A) the frequency with which elementary and secondary teachers would not hold different myths (realities) as being false (true) would not be significantly different; B) no significance of frequency independence would be found.

Responses (see Table 2) for which 100% of the subjects

answered false indicate that this sample of rural Kansas teachers reject blanket statements about gifted education or students, or the nature of giftedness. Teachers recognized the following statements as myths:

-- children who get straight As are gifted;
-- if you are gifted, you do everything perfectly;
-- being gifted and getting straight As is the same thing;
-- gifted children are so smart, they really don't need help from anyone;
-- if you have a high IQ, that means you will be someone famous when you grow up;
-- your IQ is determined before you are born and it remains the same all your life;
-- it is easy for gifted children to set their own goals;
-- gifted children already know everything;
-- if you are gifted, you always get everything right;
-- gifted children know what they want to be when they grow up;
-- gifted education cannot happen in the regular classroom.

Insert Table 2 about here

Of the 22 statements provided, the nine for which the response rate was not 100% were subjected to chi-square analysis, testing the hypothesis that elementary, secondary, and administration share similar proportions on the variable. These findings are reported in Table 3.

Insert Table 3 about here

Three are significant at the .05 level: creative children get As in school; other people often do not understand what it means to be gifted; and gifted children are very different than other children. The remaining six items for which the hypothesis of independence did not hold, or ones for which the three groups did not share similar proportions, include:

-- creative children are liked by everyone;
-- programs for gifted and creative children are unfair to other children;
-- gifted children sometimes don't like being gifted;
-- gifted children would like to have more control over their learning;
-- adults don't always realize how hard it is to be gifted;
-- if you have a high IQ you will also be highly creative.

An additional analysis was conducted on the Myths of Gifted Education instrument. Since the myths survey is composed of 22 items that fell into clusters, results from individual items were tabulated according to four groupings (see Table 4). The clusters were submitted to a 2 X 2 analysis of variance, level by sex. Two were found to be significant. The cluster, Behavior of the Gifted by sex was significant, F (1,24) = .039 $p < .05$ while IQ/Grade by level was significant, F (1,24) = 7.575 $p < .05$. Group means are reported in Table 5.

Insert Tables 4 and 5 about here

Tabulations of frequency and percentages for the Knowledge of Teaching Models instrument (see Table 6) reveal that all teachers report little sophisticated knowledge about the chief curriculum models used in gifted education, while Table 7 reports mean and standard deviations. Chi-square analyses (Table 8) indicate that there is no significant difference in the response frequency responses for elementary and secondary teachers.

Insert Tables 6, 7, and 8 about here

Finally, responses to the Gifted Education Attitude Survey were tabulated by frequency and percentages (see Table 9). Mean and standard deviations are reported in Table 10. Chi-square procedures (Table 11) were conducted on the 12 items. Significant differences in frequency by level were found for two items: To "Nothing is more unequal than treating unequal persons equally," both elementary and secondary groups agreed while administrators strongly disagreed. For Item 7, "Gifted persons cannot function within the parameters or bounds of the regular classroom, whether elementary or secondary," virtually all respondents disagreed strongly with the assertion, except

the administrative group.

Insert Tables 8, 9, 10, and 11 about here

DISCUSSION

Educational research specific to the needs of gifted students and their teachers in rural or geographically isolated areas is virtually non-existent. An assessment of the attitudes and beliefs of general educators in rural schools is critically important, since general educators will be delivering many services to gifted students in states where gifted education is required by legislative mandate. Teacher skills in selecting, adapting, and implementing curriculum models of gifted education are equally critical.

Results of this study support the contention that rural teachers believe education of the gifted can and should occur in the regular classroom, in contrast to the findings of Pringle (1972). A majority of elementary (54%) and nearly a majority of secondary teachers (46%) cited interest in staff development incorporating gifted education in their classrooms.

Parallel findings indicate an interest in learning more about curriculum designs for gifted students (elementary, 59%; secondary 41%). Interestingly, these rural educators had little interest in knowing more about counseling needs of the gifted, gifted girls, parent concerns, perfectionistic behavior, research

skills development (an aspect of several curriculum models for gifted education), or working with the parents of gifted students.

There are several plausible explanations for these findings. First, the teaching task of rural educators is already so overwhelming that relatively circumspect concerns such as perfectionism or parenting gifted children are simply not priorities. Second, this sample might not view gifted students with disabilities as a concern since this population is small in rural areas. Third, with respect to gifted girls, the ambivalent environment (i.e., one that values conformity and encourages girls to aspire to individual academic heights) in which bright rural girls find themselves, isn't of great concern to their teachers. However, the findings do not preclude the possibility that once teachers know more about curriculum models, those special interest areas might be either a concomitant interest or the next step of awareness.

This investigation clearly points toward at least one task gifted education specialists delivering staff development programs to general educators in rural areas have. That is to focus on curriculum development rather than some possibly more intriguing but esoteric topics.

Generally, the findings of this preliminary needs assessment demonstrate that teachers are interested in knowing more about meeting academic and curricular needs of gifted students. They are less interested in social-emotional needs of gifted

students or the needs of sub-groups of gifted students (e.g., gifted females or handicapped gifted students).

Results of the survey assessing rural educators' understanding of so-called "myths of gifted education" substantiate that both elementary and secondary teachers demonstrate a knowledgeable, factual base regarding gifted students. The relationship of creativity and academic giftedness seems to provide a degree of confusion for these educators. This suggests a need for further clarification via staff development.

Appropriate programming options for gifted students highlight a second area of concern. Lastly, elementary and secondary teachers hold different beliefs concerning the participation of gifted children in their own educational plans. Staff development on the topic of individual education plans for gifted students should be tailored for specific teaching levels.

As expected, rural educators are not conversant in the curriculum models typically used, adapted, or touted in the education of gifted students. Further analysis confirms that both elementary and secondary teachers share this deficiency.

Information revealed from these survey data is an important finding when coupled with data from the inservice interest survey. Educators, both at the elementary and secondary levels, indicate an overwhelming interest in learning more about serving gifted children in the general classroom. It would suggest that curriculum adaption skills are particularly critical ones in rural areas, perhaps more so than in schools with more sophisti-

cated delivery models for gifted education. Since educators "buy into" virtually none of the myths, curriculum development is a priority. It is likely that "Characteristics of the gifted" types of presentations or classes have accomplished their goals, despite results reported by Witters (1979). This sample demonstrates that it is beyond that introductory awareness stage.

Frequency data and chi-square analyses of the Gifted Education Attitude Survey suggest a paradox. While more than one third of elementary and secondary teachers surveyed believe that gifted children "always" need the opportunity to be with other gifted persons (academically and socially), this finding isn't entirely in concert with responses to other survey data. To the statement, "Gifted persons cannot function within the parameters or bounds of the regular classroom, whether elementary or secondary", nearly 100% of the elementary and secondary teachers responded never, supporting the notion that gifted education can occur in the regular classroom.

Less than 50% of both elementary and secondary teachers believe that a gifted student is a special education student. This points to a consistent response in all of the instruments that gifted education properly falls within the sphere of regular education in rural settings. The finding is an important one, particularly if teachers of the gifted are itinerant, based from centrally located special education cooperatives. Teachers do not seem to consider gifted education to be the same sort of service that might be required for learners with disabilities.

This belief, if not understood by itinerant teachers of the gifted, cooperative personnel, or administrators could result in friction between special and general educators. Ultimately, gifted students are caught in the tension. The relationship of general education and gifted education when it is within the governance of special education provides a particulary rich research agenda in the study of rural schooling.

Research focusing on geographically isolated students, ideally with a larger sample representing not only one relatively homogeneous midwestern school district, but also minorities including Asian American, Native American, black, and hispanic populations is needed. Such research would affect teacher education programs, special services for gifted students, and ultimately, delivery models of gifted education for rural areas.

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Table 1

Frequencies and Percentages of Elementary and Secondary Teachers' Responses to the Inservice Interest Survey

ITEM	Elem n=23 FRQ	%	Sec n=19 FRQ	%	Total n=42 FRQ	Total %
1. characteristics of gifted students	11	79	3	21	14	33
2. curriculum designs for gifted students	16	59	11	41	27	64
3. counseling needs of gifted students	3	43	4	57	7	17
4. learning styles/teaching styles	16	57	12	43	28	67
5. creativity	6	46	7	54	13	31
6. development of leadership skills	4	40	6	60	10	24
7. problem solving/problem finding	4	36	7	64	11	26
8. identification procedures and issues	6	43	8	57	14	33
9. gifted underachievers	10	71	4	29	14	33
10. gifted handicapped students	1	25	3	75	4	9
11. gifted girls	0	0	2	100	2	5
12. parent concerns	1	25	3	75	4	9
13. incorporating gifted ed. into the regular classroom	19	54	16	46	35	83
14. perfectionistic behavior	1	25	3	75	4	9
15. social-emotional concerns	10	63	6	37	16	38
16. research skills development	2	29	5	71	7	17
17. working with parents of gifted students	4	80	1	20	5	12
other interests listed by teachers:						
1. enlisting possible teacher support for gifted ed in the reg. classroom	5	100	0	0	5	12
2. writing	0	0	1	100	1	2

Table 2

Percentage of Elementary, Secondary, and Administration Responses to the Myths of Gifted Education Survey

ITEM	ELEMENTARY n=17		SECONDARY n=10		ADMINISTRATION n=2		
	TRUTH	MYTH	TRUTH	MYTH	TRUTH	MYTH	
1. children who get straight As are gifted	0	100	0	100	0	100	
2. if you are gifted, you do everything perfectly	0	100	0	100	0	100	
3. being gifted and getting straight As is the same thing	0	100	0	100	0	100	
4. creative children get As in school	0	100	10	90	50	50	*
5. other people often do not understand what it means to be gifted	100	0	100	0	50	50	*
6. creative children are liked by everyone	0	100	10	90	0	100	
7. programs for gifted and creative children are unfair to other children	11.8	88.2	11.1	88.9	0	100	
8. gifted children are so smart, they really don't need help from anyone	0	100	0	100	0	100	
9. if you have a high IQ, that means you will be someone famous when you grow up.	0	100	0	100	0	100	
10. Your IQ is determined before you are born and it remains the same all your life	0	100	0	100	0	100	
11. gifted children are very different from other children	0	100	10	90	50	50	*

Table 2. continued

ITEM	ELEMENTARY TRUTH	ELEMENTARY MYTH	SECONDARY TRUTH	SECONDARY MYTH	ADMINSTRATION TRUTH	ADMINSTRATION MYTH
12. teachers always understand giftedness and want to help it develop	0	100	0	100	0	100
13. gifted and creative children are easily recognized	0	100	0	100	0	100
14. gifted children sometimes don't like being gifted	100	0	90	90	100	0
15. gifted children would like to have more control over their learning	58.8	41.2	20	80	50	50
16. it is easy for gifted children to set their own goals	0	100	0	100	0	100
17. gifted children already know everything	0	100	0	100	0	100
18. adults don't always realize how hard it is to be gifted	100	0	90	10	0	100
19. if you are gifted, you always get everything right	0	100	0	100	0	100
20. gifted children know what they what to be when they grow up	0	100	10	90	0	100
21. if you have a high IQ, you will also be highly creative	0	100	10	90	0	100
22. gifted education cannot happen in regular classrooms	0	100	0	100	0	100

* $p < .05$

Table 3

Results of Chi-Square Analyses of Myths of Gifted Education Items

Myth	Chi-Square	DF	SIG
Creative children get As in school.	7.17	2	.0274 *
Other people often do not understand what it means to be gifted.	13.98	2	.0009 *
Creative children are liked by everyone.	1.97	2	.3738
Programs for gifted and creative children are unfair to other children.	.26	2	.8776
Gifted children are very different from other children.	7.196	2	.0274 *
Gifted children sometimes don't like being gifted.	1.97	2	.3738
Gifted children would like to have more control over their learning.	1.478	2	.4774
Adults don't always realize how hard it is to be gifted.	1.968	2	.3738
If you have a high IQ, you will also be highly creative.	1.97	2	.3738

* $p < .05$

Table 4

Results of the Analysis of Variance by Four Cluster Groups of the Myths of Gifted Education Survey

Behavior of the Gifted

Source	SS	DF	MS	F
main effects	1.526	2	.763	2.924
level	.783	1	.783	3.002
sex	1.259	1	1.259	.039 *
2-way interaction				
level sex	.756	1	.756	2.897
	.756	1	.756	2.897
explained	2.281	3	.760	2.915
residual	5.479	21	.261	
total	7.760	24	.323	

p <.05

Adult Behaviors

Source	SS	DF	MS	F
main effects	0.0	2	0.0	0.0
level	0.0	1	0.0	0.0
sex	0.0	1	0.0	0.0
2-way interaction	0.0	1	0.0	0.0
level and sex	0.0	1	0.0	0.0
explained	0.0	3	0.0	0.0
residual	2.0	21	.095	
total	2.0	24	.083	

p <.05

Table 4. continued

Programming Options

Source	SS	DF	MS	F
main effects	.123	2	.061	.512
level	.009	1	.009	.074
sex	.121	1	.121	1.014
2-way interaction level sex	.003	1	.003	.027
explained	.126	3	.042	.350
residual	2.514	21	.120	
total	2.640	24	.110	

p <.05

IQ/Grades

Source	SS	DF	MS	F
main effects	.483	2	.242	4.229
level	.433	1	.433	7.575 *
sex	.199	1	.199	3.481
2-way interaction level and sex	.157	1	.157	2.741
explained	.640	3	.213	3.733
residual	.200	21	.057	
total	1.840	24	.077	

p <.05

Table 5

Groups Means of the Four Clusters from the Myths of Gifted Education Survey

	Behaviors of the Gifted n=25 $\bar{X}$=16.36	
	males	females
elementary	16.50 n=2	16.43 n=14
secondary	16.75 n=4	15.80 n=5

	Adult Behaviors with Regard to Gifted Learners n=25 $\bar{X}$=6.0	
	males	females
elementary	6.00 n=2	6.00 n=14
secondary	6.00 n=4	6.00 n=5

Table 5, continued

Programming Options
n=25

$\bar{X}$=5.88

	males	females
elementary	5.88 n=2	5.89 n=14
secondary	6.00 n=4	5.84 n=5

IQ/Grades
n=25

$\bar{X}$=11.92

	males	females
elementary	12.00 n=2	12.00 n=14
secondary	12.00 n=4	11.60 n=5

Table 6

Percentages Elementary and Secondary Teachers Indicating Awareness to Mastery Skill Levels to the Knowledge of Teaching Models Instrument

MODELS	ELEMENTARY n=20					SECONDARY n=22				
(response code a)	1	2	3	4	5	1	2	3	4	5
BLOOM	10	25	40	15	10	32	37	16	16	0
KRATWOHL	75	20	0	5	0	84	16	0	0	0
BRUNER	80	20	0	0	0	79	21	0	0	0
GUILFORD	85	10	0	5	0	90	10	0	0	0
KOHLBERG	85	10	0	4	0	90	10	0	0	0
PARNES	95	0	0	5	0	95	5	0	0	0
RENZULLI	90	5	0	5	0	0	0	0	0	0
TABA	90	5	5	0	0	100	0	0	0	0
TAYLOR	85	10	0	0	5	95	5	0	0	0
TREFFINGER	95	0	0	5	0	5	95	0	0	0
WILLIAMS	90	5	0	5	0	100	0	0	0	0
CLARK	95	0	5	0	0	100	0	0	0	0

a 1 = no awareness
2 = slight awareness
3 = moderate awareness
4 = good awareness
5 = mastery awareness

Table 7

Report of Means and Standard Deviations of the Knowledge of Teaching Models Instrument

	$\bar{X}$		SD	
Model	Elementary	Secondary	Elementary	Secondary
Bloom	2.9	2.158	1.119	1.068
Kratwohl	1.350	1.105	.745	.459
Bruner	1.2	1.158	.410	.501
Guilford	1.25	1.105	.716	.567
Kohlberg	1.25	1.105	.716	.315
Parnes	1.15	1.00	.716	.333
Renzulli	1.25	.947	.910	.229
Taba	1.15	.947	.489	.229
Taylor	1.30	1.00	.923	.333
Treffinger	1.15	.947	.671	.229
Williams	1.2	.947	.696	.229
Clark	1.1	.947	.447	.229

Table 8

Chi-Square Results to the Knowledge of Teaching Models Instrument

Model	Chi-Square	DF	Sig.
Bloom	12.47	8	.13
Krathwohl	2.80	6	.83
Bruner	1.52	4	.82
Guilford	5.78	8	.67
Kohlberg	6.52	4	.16
Parnes	3.57	6	.73
Renzulli	8.59	6	.198
Taba	3.45	6	.75
Taylor	4.62	6	.59
Treffinger	2.31	4	.67
Williams	3.45	6	.75
Clark	2.32	4	.68

$p < .05$

Table 9

Percentages of Elementary Teachers' Responses to the Gifted Education Attitude Survey

ITEM (response code a)	Elementary n=20 5	4	3	2	1
1. All people (including children are created equally.	16.7	0	0	0	31.0
2. Nothing is more unequal than treating unequal persons equally.	35.7	0	11.9	0	0
3. I have trouble with the term or label "gifted".	31.0	0	7.1	0	9.5
4. All of us are talking about the same thing when we start talking about giftedness.	0	0	7.1	0	40.5
5. Giftedness is in the response.	19.0	0	14.3	0	14.3
6. Gifted persons need the opportunity to be with other gifted persons (both academically and socially).	40.5	0	0	0	7.1
7. Gifted persons cannot function within the parameters or bounds of the regular classroom, whether elementary or secondary.	2.4	0	0	0	45.2
8. Students who are gifted are the primary responsibility of their parents who need to nurture that giftedness in whatever manner possible.	7.1	0	4.8	0	35.7
9. Gifted students, more so than their classmates, need to have the opportunity to plan with parents and teachers their academic program.	21.4	0	4.8	0	21.4
10. Organizational or logistical problems seem to represent the greatest obstacles in serving gifted children.	19.5	0	22.0	0	4.9
11. A gifted child is a special education student.	42.9	0	0	0	4.8
12. Public relations is an important ingredient of a successful gifted program in a school.	35.7	0	4.8	0	7.1

response code a: 5=strongly agree; 4=agree; 3=no opinion; 2=disagree; 1=strongly disagree

Table 9, continued

Percentages of Secondary Teachers' Responses to the Gifted Education Attitude Survey

ITEM (response code a)	Secondary n=19 5	4	3	2	1
1. All people (including children are created equally.	4.8	0	2.4	0	38.1
2. Nothing is more unequal than treating unequal persons equally.	31.0	0	2.4	0	11.9
3. I have trouble with the term or label "gifted".	23.8	0	7.1	0	14.3
4. All of us are talking about the same thing when we start talking about giftedness.	2.4	0	2.4	0	40.5
5. Giftedness is in the response.	7.1	0	16.7	0	21.4
6. Gifted persons need the opportunity to be with other gifted persons (both academically and socially).	33.3	0	4.8	0	7.1
7. Gifted persons cannot function within the parameters or bounds of the regular classroom, whether elementary or secondary.	0	0	0	0	45.2
8. Students who are gifted are the primary responsibility of their parents who need to nurture that giftedness in whatever manner possible.	16.7	0	7.1	0	21.4
9. Gifted students, more so than their classmates, need to have the opportunity to plan with parents and teachers their academic program.	21.4	0	2.4	0	16.7
10. Organizational or logistical problems seem to represent the greatest obstacles in serving gifted children.	29.3	0	14.6	0	2.4
11. A gifted child is a special education student.	33.3	0	4.8	0	7.1
12. Public relations is an important ingredient of a successful gifted program in a school.	33.3	0	7.1	0	4.8

response code a: 5=strongly agree; 4=agree; 3=no opinion; 2=disagree; 1=strongly disagree

Table 9. continued

Percentages of Administrators' Responses to the Gifted Education Attitude Survey

ITEM (response code a)	Administrators n=3 5	4	3	2	1
1. All people (including children are created equally.	2.4	0	0	0	4.8
2. Nothing is more unequal than treating unequal persons equally.	7.1	0	0	0	0
3. I have trouble with the term or label "gifted".	2.4	0	0	0	4.8
4. All of us are talking about the same thing when we start talking about giftedness.	0	0	0	0	7.1
5. Giftedness is in the response.	4.8	0	0	0	0
6. Gifted persons need the opportunity to be with other gifted persons (both academically and socially).	4.8	0	0	0	2.4
7. Gifted persons cannot function within the parameters or bounds of the regular classroom, whether elementary or secondary.	2.4	0	0	0	4.8
8. Students who are gifted are the primary responsibility of their parents who need to nurture that giftedness in whatever manner possible.	4.8	0	0	0	2.4
9. Gifted students, more so than their classmates, need to have the opportunity to plan with parents and teachers their academic program.	2.4	0	0	0	4.8
10. Organizational or logistical problems seem to represent the greatest obstacles in serving gifted children.	7.3	0	0	0	0
11. A gifted child is a special education student.	7.1	0	0	0	0
12. Public relations is an important ingredient of a successful gifted program in a school.	4.8	0	0	0	2.4

response code a: 5=strongly agree; 4=agree; 3=no opinion; 2=disagree; 1=strongly disagree

Table 10

Mean and Standard Deviation Results of the Gifted Education Attitude Survey

Item	$\bar{X}$		SD	
	Elementary	Secondary	Elementary	Secondary
1.	2.75	2.053	1.552	.848
2.	3.90	3.474	.641	.964
3.	3.60	3.263	1.142	1.147
4.	1.65	1.737	.745	.806
5.	3.1	2.684	.852	.749
6.	3.75	3.632	.967	.831
7.	1.75	1.632	.716	.496
8.	2.35	2.895	.813	1.10
9.	3.05	3.211	1.05	.976
10.	3.368	3.579	.761	.607
11.	3.9	3.579	.718	.769
12.	3.9	3.684	1.021	.749

Table 11

Results of Chi-square Analysis of the Gifted Education Attitude Survey

ITEM #	CHI-SQUARE	DF	SIG.	
1	4.29	4	.37	
2	9.53	4	.04	*
3	3.14	4	.53	
4	2.56	4	.63	
5	5.29	4	.26	
6	3.18	4	.53	
7	6.35	2	.04	*
8	5.55	4	.23	
9	1.62	4	.80	
10	4.29	4	.37	
11	3.50	4	.48	
12	1.64	4	.80	

$p > .05$